

FIG. 1

	Resin Composition (parts by weight)								
	A(Prior Art)	B(Prior Art)	C(Prior Art)	D	E	F	G	H	I
Epoxy	EPON 828 65	EPON 828 65	EPOLITE 2447 100	EPON 826 100	GY-6008 100	MY-721 100	ERL 4221 100	ERL 4221 90	MY-721 100
Diluent	ERL 4206 35	ERL 4206 35	ERL 4206 5	HELOXY-67 25	RD 2 25	HELOXY-67 45	none	EPON 826 10	none
Hardener	HT-972 39.5	EPOLITE 2330 21.6	EPOLITE 2330 23	EPOLITE 2330 19.4	EPOLITE 2330 19.4	EPOLITE 2330 HY-5200 53.8	EPOLITE 2330 19.0	EPOLITE 2330 18.5	HY-5200 35
Catalyst	None	none	none	none	None	EPIKURE 537 0.5	EPIKURE 537 1.0	EPIKURE 537 1.0	EPIKURE 537 0.12-0.13

FIG. 2
Composition and Composite Properties

Composition and Composite Properties									
	A(Prior Art)	B(Prior Art)	C(Prior Art)	D	E	F	G	H	I
Viscosity (cP)	500	560	520 @ 120 F	1400	1400	1100	1140	1470	1000 @ 135 F
Pot life (hr)	18	17	4	7	7	28	>13	>13	10 @ 135 F
RT Gel (hr)	48	48	30	32	36	TBD	<120	TBD	TBD
B stage (hr) 120 F	15	15	6	10	11	48	6-10	>22	TBD
B stage (hr) 140 F	9	9	-	TBD	TBD	24	4-8	TBD	24
Gel at 300 F, min	7	5	5	4.5	4.4	5.9	2	1.9	20
Tg, dry (F)	330	320	405	290	290	336	374	371	409
Tg, wet (F)	248	248	252	231	231	263	256	349	395
Resin moisture pickup after 48 hr water boil, %	2.48	3	1.57	3.3	3.3	2.9	3.7	3.1	1.6
Density	1.200/1.201	1.200/1.201	1.24	1.2117	1.2117	1.1864	1.2287/1.2251	1.23	1.24
SBS, RT, Dry, ksi	9.3	9.8	8.54 †	8.6	8.6	8.7	10.4	7.7	8.8 †
SBS, RT, Wet, ksi	9.1	9.2	8.0 †	8.5	8.5	8.5	9.6	6.8	8.7 †
SBS, 250 F, Dry, ksi	5.3	6	4.97 @ 350 F †	4.9	4.9	5.3	7.4	6.3	TBD @ 350 F †
SBS, 250 F, Wet, ksi	3.4	3.8	3.68 @ 350 F †	4	3.9	4.5	5.9	5	4.9 @ 350 F †
Composite moisture pickup after 48 hr water boil, %	0.51	0.62	0.57	0.65	0.65	0.6	1	1	0.45
12 inch Pressure vessel fiber strength (ksi) using T-800HB-12000-40B fiber	658-720	654	826 †	688.5	665	663	654	604	790 †
† T1000GB fiber							767 †		
† M30SC fiber							825 †		